AMENDMENT TO THE DRAWINGS

The attached replacement sheets of Drawings replace the original sheets including Figs. 33, 35, 37, 39 and 41. Figs. 33, 35, 37, 39 and 41 have been amended.

REMARKS/ARGUMENTS

The present Amendment is responsive to the non-final Office Action mailed November 10, 2008 in the above-identified application.

Claims 7-10 are currently canceled without prejudice or disclaimer. Therefore, claims 1, 3-6, 11-28 and 45 are the claims currently pending in the present application.

Claim 1 is amended to clarify a feature recited thereby. This amendment is fully supported by Applicant's disclosure, see for example, claim 10 (now canceled).

Objection to the Drawings

Figures 33, 35, 37, 39 and 41 are the Drawings are objected to on the ground that the titles should be amended to remove the term "of MSL." The cited figures of the Drawings are amended.

Rejection of Claims 1, 3-13, 17, 18, 21 and 45 under 35 U.S.C. §103

Claims 1, 3-13, 17, 18, 21 and 45 are rejected under 35 U.S.C. §103 as being obvious from Senda et al., U.S. Patent No. 5,990,417. Reconsideration of this rejection is respectfully requested.

As explained, for example at Specification, page 10, lines 3-10, an object of the present invention is to provide an electromagnetic noise suppressor that has a high electromagnetic noise suppressing effect in the sub-microwave frequency band, for example in the 1GHz to 3GHz frequency band, requires small installation space and is light in weight. Another object is to provide an electromagnetic noise suppressor that is both flexible and has high strength.

Without intending to limit the scope of the claims, according to an aspect of Applicant's invention as claimed in claim 1, an electromagnetic noise suppressor is provided that is not too thick but provides efficiently large loss characteristics in the high-frequency region because the composite layer includes atoms of the magnetic material dispersed without crystallizing in the binding agent. Accordingly, a sufficient electromagnetic noise suppressing effect is achieved in the sub-microwave band.

Claim 1 requires an electromagnetic noise suppressor with a composite layer having a thickness in a range from 0.005μm to 0.3μm.

Senda discloses an electromagnetic noise absorbing material and that an electromagnetic noise filter in which the EM noise absorbing material includes a binding agent, which is a non-magnetic insulating material and a magnetic material, which is an alloy magnetic substance, and that the binding agent and magnetic material are integrated with each other into a composite layer.

Senda does not disclosure or suggest an electromagnetic noise suppressor with a composite layer having a thickness in a range from 0.005μm to 0.3μm, as required by claim 1.

Senda discloses that the alloy magnetic substance has "skin depth" in the range 0.16μm to 1.6μm. As would be readily understood by a person of ordinary skill in the art, the term "skin depth" is a measure of the distance that an alternating current can penetrate beneath the surface of the conductor. The skin depth is a characteristic value depending on the material and on the frequency of the current. The skin depth does not describe the thickness of a structure as a whole, such as the thickness of a composite layer.

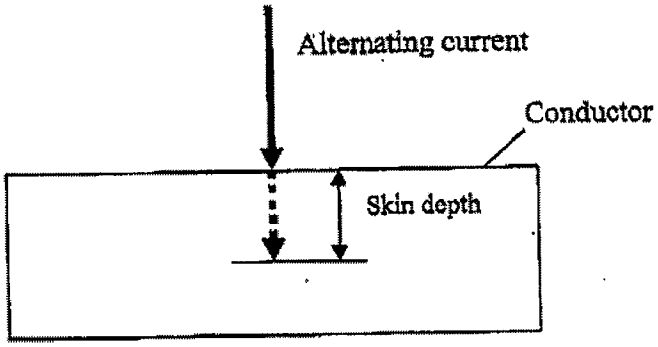


ILLUSTRATION 1

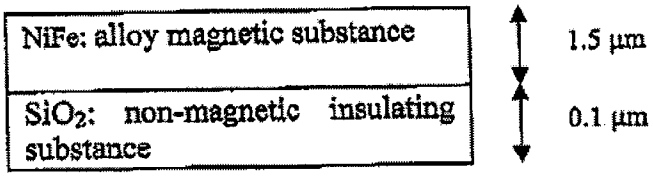


ILLUSTRATION 2

Illustration 1 shows a skin depth of a conductor with respect to an alternating current. For example, skin depth of 0.16μm to 1.6μm means that an alternating current decreases in the distance of 0.16μm to 1.6μm in the alloy magnetic substance. This skin depth is unrelated to the thickness of a composite layer.

In addition, Senda discloses that a thickness of a SiO_2 layer that is a non-magnetic insulating layer under the alloy magnetic substance has a thickness of 0.1μm (Senda, column 10, lines 54 - column 11, line 2) as illustrated in Illustration 2. Thus, it would have been abundantly clear to a person of ordinary skill in the art that Senda's disclosure of a thickness of the SiO_2 layer of 0.1μm is unrelated to the thickness of the composite layer. Accordingly, Senda does not disclose or suggest the recitations of claim 1.

More generally, it is respectfully submitted that the recitations of claim 1 would not have been obvious based on Senda and the cited art because the cited art does not disclose or suggest the effects or advantages disclosed by Applicant's disclosure. For example, as taught in Specification, lines 19-23 of the present application, atoms of the magnetic material can be dispersed in the binding agent and integrated therewith, thus providing a large loss characteristic in a high-frequency region due to morphological anisotropy, and thus achieving sufficient electromagnetic noise suppression. Further, as disclosed at Specification, page 31, lines 2-4, such an arrangement of the composite layer does not lead to a decrease in morphological anisotropy and to a reduced electromagnetic noise suppressing effect.

Senda, on the other hand, is concerned with a different type of electromagnetic noise suppression. Senda discloses providing an electromagnetic noise absorbing material and an electromagnetic noise filter which solves the problems present in various conventional electromagnetic noise filters, namely, that the value and weight of the filter is large and that electromagnetic noise filters are ineffective at levels of a few hundred MHz or more and are effective for suppressing unwanted electromagnetic waves of a few hundred MHz or more. Since Senda is concerned with a different type of noise suppression, Senda does not address the problems recognized and solved by the above-discussed features of Applicant's disclosure. In addition, the electromagnetic noise suppressing effect in the sub-microwave band is quite different for Senda because Senda does not disclose or suggest an effective EM noise suppression effect in the sub-microwave band. Accordingly, it is respectfully submitted that

Applicant's invention as claimed in claim 1 would not have been obvious based on Senda and the cited art.

As illustrated in Figure 3 of the Kim reference filed in the Information Disclosure Statement filed herewith, in the conventional art, including in Senda, the ratio of power loss to the input power is quite low at or under the 1GHz frequency, and the power loss curve is convex downward. Kim discloses the same composition CoNbZr and structure, that is magnetic film/polyimide, as Senda. Kim shows the ratio of power loss to input power that would be typical in the prior art, including in Senda.

The ratio of power loss to input power of as a function of frequency (in the frequency range of 0.1GHz to 20GHz) is illustrated in Figure 3 of Kim, provided here as Illustration 3. Figure 3 of Kim shows that the ratio of power loss to input power frequency range 0.1GHz to 1GHz. While Kim shows that the ratio of power loss to input power undergoes a sudden increase after the 1GHz mark, the ratio power loss to input power never exceeds the value of 0.6 in the 1GHz to 3GHz frequency range. Accordingly, it is respectfully submitted that Applicant's invention as claimed in claim 1 would not have been obvious based on the cited art.

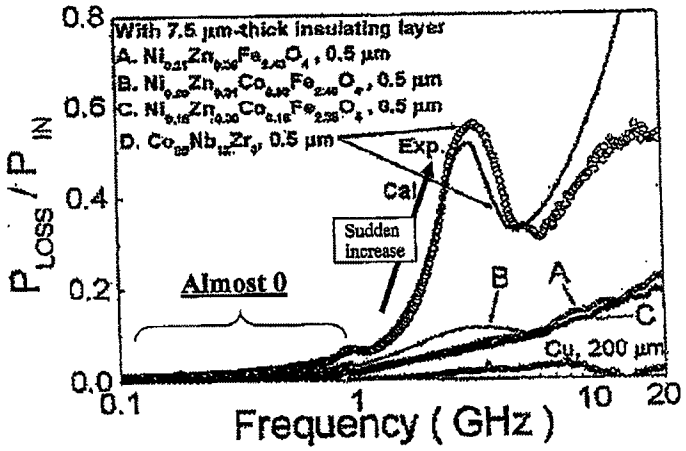


Fig. 3 The power losses on coplanar transmission line with NiZn(-Co) ferrite magnetic films are shown in comparison with that of the CoNbZr film, and the nonmagnetic metallic film(Cu) using 7.5 μm thickness of insulating layer between the transmission line and the magnetic film.

ILLUSTRATION 3

On the other hand, as disclosed in Applicant's disclosure, an advantage of the present invention is the improved ratio of power loss to input power. The ratios of power loss to input power versus frequency are illustrated in Figures 27-29 of the present application.

Notice in Figs. 27-29, provided for examples 8-10, the steep slope of the power loss curve in the above-identified lower frequency band. As explained in Specification, page 61, line 11-19 of the present application, a power loss curve of the electromagnetic noise suppressor of the present invention, in contrast, is convex upward so that the power loss shows a steep increase in the frequency region from below the 1GHz to 5GHz frequency range, and then the increase slows down beyond the 1.5GHz to 2GHz range, as illustrated in Figures 27-29. Thus, the electromagnetic noise suppressor of the present invention has sufficient power loss characteristics at frequencies around 1GHz where it is expected to have a practical effect.

Rejection of Claims 1, 3-28 and 45 under 35 U.S.C. §103

Claims 14-16 are rejected under 35 U.S.C. §103 as being obvious from Senda in view of Farris et al. (The Characterization of Thermal and Elastic Constants for an Epoxy Photoresist SU8 Coating).

Claims 19 and 20 are rejected under 35 U.S.C. §103 as being obvious from Senda in view of Inomata et al., JP 2000/196281.

Claims 1, 3-18, 21-24, 27, 28 and 45 are rejected under 35 U.S.C. §103 as being obvious from Senda in view of Sato et al., U.S. Patent No. 5,864,088.

Claim 25 is rejected under 35 U.S.C. §103 as being obvious from Sato in view of Okamura, U.S. Patent No. 6,104,530.

Claim 26 is rejected under 35 U.S.C. §103 as being obvious from Senda in view of Sato, Okamura and Kadokura et al., U.S. Patent No. 4,784,739. Reconsideration of these rejections is respectfully requested.

Farris, Inomata, Sato, Okamura and Kadokura do not cure the above-discussed deficiencies of Senda as it relates to the above-noted features of claim 1. Further, the Office Action does not allege that these references disclose or suggest such features. Accordingly, even taken together in combination, the cited art does not disclose or suggest the recitations of claim 1.

Claims 3-28 and 45 depend from claim 1 and are therefore patentably distinguishable over the cited art for at least the same reasons.

Double Patenting Rejection of Claims 1, 7-10, 13, 14 and 45

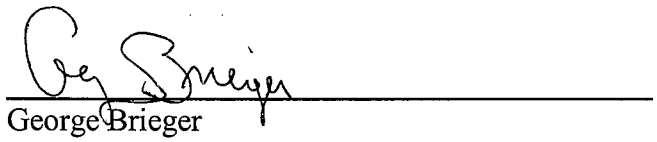
Claims 1, 7-10, 13, 14 and 45 are provisionally rejected under the nonstatutory obviousness-type double patenting doctrine as being obvious from claims 1, 3, 5, 7, 13 and 14 of co-pending U.S. Application No. 10/538,132.

A Terminal Disclaimer is filed herewith. Accordingly, this rejection is moot.

In view of the foregoing discussion, withdrawal of the objection and the rejections and allowance of the claims of the present application are respectfully requested.

Respectfully submitted,

THIS CORRESPONDENCE IS BEING SUBMITTED ELECTRONICALLY THROUGH THE PATENT AND TRADEMARK OFFICE EFS FILING SYSTEM ON March 10, 2009.



George Brieger
Registration No.: 52,652
OSTROLENK, FABER, GERB & SOFFEN, LLP
1180 Avenue of the Americas
New York, New York 10036-8403
Telephone: (212) 382-0700

RCF:GB/jl